

Title

## **Artificial Intelligence (AI) Agents in Asset and Liability Management (ALM)**

---

Speaker/Company

**Duc Hien VU, Solvencii**

---

Abstract

This presentation provides a concise introduction to key concepts of large language models (LLMs), including the Transformer architecture, self-attention mechanisms, pre-training, fine-tuning, next-token prediction, temperature control, prompt engineering, and Retrieval-Augmented Generation (RAG). Building on these foundations, we will explore the design, implementation, and performance of AI-driven agents within a SaaS platform for Asset-Liability Management (ALM) modeling. By leveraging AI, ALM processes can more effectively manage risks and optimize portfolio performance across diverse market conditions, surpassing the capabilities of traditional approaches. The integration of AI into ALM frameworks offers actuaries innovative tools to enhance risk management strategies, delivering greater value to stakeholders in today's dynamic and unpredictable economic environment.

---

Biography

Duc Hien, a Fellow of the Institut des Actuaire (France), brings over a decade of experience in the insurance industry, spanning both consulting and corporate roles. Specializing in life insurance, investments, asset and liability management (ALM), and Solvency II, he combines technical expertise with a passion for innovation. In his free time, he enjoys exploring programming, web development, and artificial intelligence.

In September 2023, Duc Hien left his corporate career to launch SOLVENCII, a start-up dedicated to transforming actuarial and financial modeling.

About SOLVENCII:

Our flagship product, Solvencii Lab ([solvencii.fr](https://solvencii.fr)), began as a side project in 2020, focused on creating a web interface for existing ALM software. By 2023, we expanded to developing ALM models and algorithms, primarily in Python, leveraging:

- Cloud Computing and WebAssembly for scalable deployment, and
  - AI-powered tools, including Solvencii Copilot, a suite of AI agents designed to help users maximize the platform's capabilities.
-